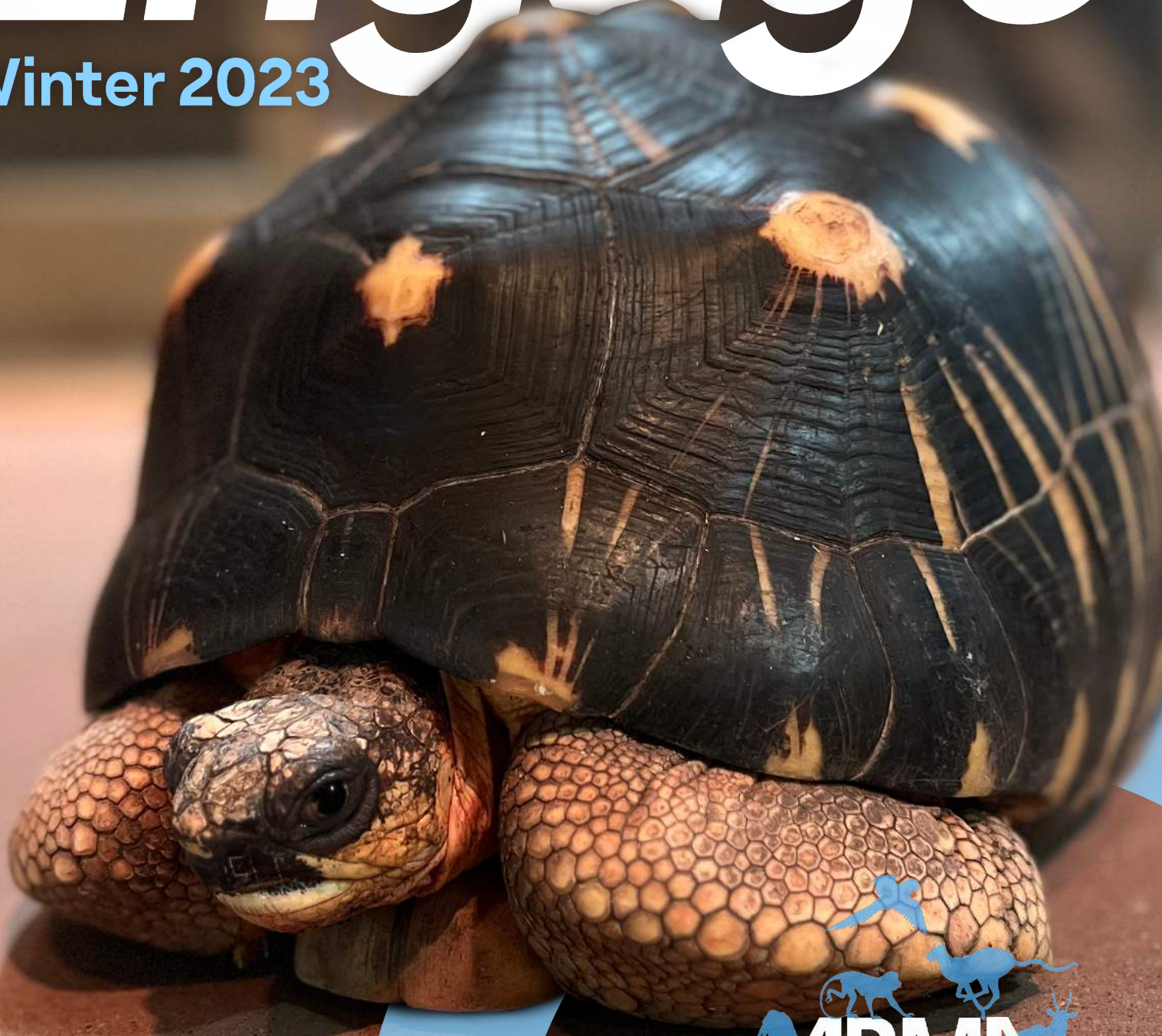


# Engage

Winter 2023



The Animal Behavior Management Alliance.

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# President's Letter

There are so many exciting things happening for the Animal Behavior Management Alliance in 2023. The upcoming joint conference with the International Marine Animal Trainers' Association (IMATA) will be held in Atlanta, Georgia March 5th-10th and registration is open now. It will be an amazing event celebrating both organizations and is guaranteed to have informative presentations and spectacular guest speakers. This will be our first in-person conference in three years, and we are thrilled to be back together again! "Engage", our digital newsletter, is evolving and will soon have a new look as well as QR codes which will give you access to videos related to the articles. At the end of last year, we launched ABCs – Animal Behavior Conversations. This Zoom series offers a chance to have face-time with fellow trainers throughout the year to ask questions and share training challenges, stories, and successes. And finally, we will soon be launching "Animal Behavior Conversations: An ABMA Podcast". This podcast series will provide the opportunity to hear interviews and stories from professionals on a wide variety of animal-related subjects. There are so many ways to stay connected to your ABMA family! We appreciate your continued support of the organization and hope to see you at the conference in March!



**Kelly Elkins**

President, the Animal Behavior Management Alliance 2022-2023





## About ABMA

The Animal Behavior Management Alliance (ABMA) is a not-for-profit 501(c)(3) corporation with a membership comprised of animal care professionals and other individuals interested in enhancing animal care through training and enrichment. The ABMA is intended to be nurturing and informative, and was created to serve trainers, handlers, and keepers of animals, irrespective of species, with information and assistance in the behavior management of their charges.



### Our Mission

The Animal Behavior Management Alliance (ABMA) continually strives to advance intentional and enlightened behavior management to improve the lives and welfare of all animals.

### Our Vision

To be a global leader dedicated to advancing animal welfare through excellence in behavior management.

## Our Core Values

- Behavior management is an essential component of animal welfare.
- Environmental enrichment and positive reinforcement training are highly effective strategies for managing and modifying behavior.
- Goal-based enrichment, designed to offer animals behavioral opportunities, is an essential component of all animal programs.
- Positive reinforcement training is our most effective and ethical method of behavior modification.
- Human and animal safety must be at the core of an animal behavior management program.
- Learning should be conducted in a nurturing and non-threatening environment for both animals and people.
- Science-based methods of assessment are a valuable tool for evaluating, refining, and advancing behavior management strategies.
- Behavior management can advance conservation by helping to mitigate human-animal conflict in wild populations, facilitating in situ conservation efforts, and maintaining behaviorally and physically healthy captive populations.
- Pro-active behavior management is an essential component of responsible animal care since learning is always occurring.
- The sharing of knowledge and new ideas is fundamental to advancing animal behavior management.



### ABMA Disclaimer

One of the core values of the ABMA states that:

***The sharing of knowledge and new ideas is fundamental to advancing animal behavior management.***

We do this in many ways, such as through our conferences, publications, and social media. Our written publications feature many fascinating and thought-provoking papers and articles. Some you may agree with, others may challenge your perceptions and ideas. And while the content that you read reflects the views of the author and does not necessarily represent the feelings of the ABMA or the board of directors, we think that the diversity of subjects and viewpoints represented by our members, at our conferences, in our publications, and via our social media outlets is one of the strengths of this organization. We encourage you to take in all that you read with an open mind, because you might be surprised by what you learn.



# Board Members

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**Kelly Elkins**



Past President

**Scott Trauger**



President - Elect

**Anaka Nazareth**



Secretary

**Elizabeth Durkin**



1st Vice President

**Traci James**



Chief Financial Officer

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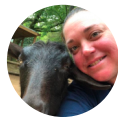
Director

**Shane Gorbett**



Director

**Tim Van Loan**



Director

**Wendy Ricker**



## Emergency Animal Recall Training

Nicki Boyd, San Diego Zoo | Peter Giljam, ZooSpensefull

In 2017, the San Diego Zoo embarked on a new safety protocol with emergency recall for our open fronted habitats that had dangerous animals inside. We knew the tragedy that befell another North American Zoo, when a child climbed a barrier and then fell into a gorilla habitat, could happen anywhere and we wanted to be prepared for that or any type of emergency. I knew the Kolmarden Zoo had been doing some amazing recall behaviors with carnivores so I reached out to my colleague and peer Peter Giljam, the Behavior Manager, to get some help setting up our program. They had some great videos and he talked me through our list of questions. The species we decided to train the emergency recall with was our gorillas, polar bears, grizzly bears, and tigers. Each habitat had an open viewing area which made them the priority areas to train. We began by meeting with all levels. The support came from the top, our CEO, and then spread through each level; curators, veterinarians, managers, supervisors, nutritionists, leads, and keepers. It is important that everyone understands, and is invested in the process in order to have support for equipment, training time, high value reinforcers, training knowledge, and a well thought out training plan.

All four habitats had a waterfall feature so that is where we decided to place an electronic school bell with an emergency push button for the wildlife care specialist to initiate the recall tone. This did cost the zoo money for the initial investment in equipment and electrical conduit, but the expense and ramification of a tragedy would have been a far greater price to pay.

## Recall Videos

*Scan the QR codes or click the titles to watch videos*



### Grizzly Bear Emergency Recall at SDZWA

Emergency recall of grizzly bears at the San Diego Zoo. First video is a practice and second is an actual drill of the emergency recall.



### Tiger Emergency Recall at SDZWA

Tiger emergency recall after object is thrown into habitat at SDZWA.



### Polar Bear Emergency Recall at SDZWA

Emergency recall of three polar bears at SDZWA.



### Gorilla Emergency Recall at SDZWA

Emergency Recall of gorilla troop at SDZWA.



After we established our training plans (and I have outlined the process below), we had many questions. Peter always had the answer I needed and it helped reassure all of us that we were on the right training path. As you read through the recommendations below I just have to ask everyone that manages large carnivores can you afford NOT to train an emergency recall? This has been one of the most rewarding training programs I have been in. While it took effort to set it up, it has been easy to maintain and has already proven successful in many “tests”.(Which can be seen in the videos linked by the QR codes in this article.) We all hope there will never be another tragedy, but having a successful emergency recall is one more tool in your training toolbox to prevent potential loss of life; human or animal.



# Before You Begin – General Tips and Recommendations

## General Tips/Recommendations

Use Species Fact Sheets; know the species natural history, including understanding the following:

- Any seasonal changes in behavior (i.e., weather or breeding season)
- Food types preferred by the species
- The species-typical social structure including any individual variations from typical behavioral expectations
- Working with your veterinarian or nutrition staff, seek to discover high value food items you can ideally save for the emergency recall

## Beginning training

- Set your antecedent arrangement up for success
- Initially pair the emergency recall with normal recall
- Phase out normal recall quickly and observe within the second or third session if they are responding to the different emergency recall cue
- Make sure the emergency recall cue can be heard throughout the habitat and that it is a unique sound they do not hear anywhere else. (Exhibit noise levels – consideration should be given for water features like streams or waterfalls, and crowd noise)
- Discuss the criteria for allowable response time and consequences (loss of opportunity)
- Establish and discuss unacceptable response times or lack of response in your training plan
- If possible, video each session as the time stamp will help you track improvements in the animal's response times
- Vary the times of day the emergency recall training is offered
- Always be aware of seasonal changes that may impact the animal's behavior, i.e. bears may be slower in the winter. Seasonally changing hormone levels may also play significant role in your training plan, so adjust accordingly

## Considerations/Cautions

- With your understanding of the species social hierarchy within the exhibit habitat, plan accordingly for animal separations once inside the bedrooms
- Remember the emergency recall is a cue and should be short (of limited duration) and not a continuous sound.
- This behavior has no completion date and must be perpetually practiced to ensure the animal's immediate compliance. Set a schedule and stay on top of it.
- You will discover that within your staff there are sure to be many opinions. Always listen to your staff and always consult with others in the industry (as I did with Peter) that have developed emergency recall programs. Once you have a plan, trust it.
- Once the emergency recall response has been well established, there are several ways to test the strength of your emergency recall. With veterinary/curatorial consultation drop something into the habitat. Make certain the animals are aware of the presence of something unusual in their space, and sound the emergency recall. Alternatively, sound the emergency recall immediately after the animals have been released from their bedrooms in the morning. Like a fuel gauge in your car, the animal's response time will indicate if the behavioral response is appropriate or still needs shortening.
- Do not be fooled into thinking your daily recall of the animals to their bedrooms is sufficiently strong enough to be helpful during an actual emergency. Emergency recall is a different behavior with different rewards. The emergency recall behavior must have greater (type, not quantity) rewards for the animal's immediate compliance. Do not over or under utilize the emergency recall. In the beginning plan to offer the emergency recall opportunity every 1-2 weeks. Post conditioning; maintain the behavior by providing the opportunity once every 1-2 months. The animal's immediate response to the emergency recall and exiting the habitat is the behavior you are reinforcing.
- Do not be concerned about having the exact right high value foods available during an actual emergency. At this point, you are relying on the history of the reinforcements the animals have earned for the behavior. In fact, in an actual emergency, you may not even have time to reinforce the animals for exiting their habitat. Behavior is plastic and missing a single reward for a correct response will not pose a problem for the animals. The idea is that the behavior is so well conditioned that missing a high value reinforcement one time will not ruin the emergency recall behavior or your previous training.

## ZooSpensefull Emergency Recall

The emergency recall was introduced at Kolmården Wildlife Park in 2015 to excel in safety for the pride of lions and change the safety procedure practiced previously with this species. In the past, the procedure was chasing the pride twice a year to get them to go inside. This was done with several jeeps, rubber bullets, and fire extinguishers. In 2011 Kolmården Wildlife Park decided to install a cable car above the safari. The visitors could now look down to the animals instead of driving through the exhibit, however, this didn't change the safety practice from happening twice a year. In 2015, this was successfully changed when one of the keepers requested a change in the procedure. After many meetings and building the right plan, we had our first response one month later.

Zoo's need to install more and more changes to keep the visitor safe during their stay at the zoo. We want to change exhibits to make them both more natural in appearance, but safe at the same time. Even though we are succeeding, the chances that visitors can get into an exhibit is also increasing.

The emergency recall gives an extra chance to the animals to leave everything happening in their exhibit and come inside. To be able to reach this goal we have to look into a variety of situations that could potentially happen during the opening hours in the park. We need to understand that this procedure will not give a 100% chance of survival, however, this procedure does give the animal an extra chance to not be shot themselves.

This behavior is successfully conditioned with marine mammals and now carnivores. The reason it has been very successful with these species is due to the fact that those species are not eating continuously throughout the day. This has a huge effect on the motivation of the species. The goal of the emergency recall is to respond to the signal regardless of what is happening in your exhibit. To be able to reach this goal we need to look into the motivational factors; why certain situations are more interesting than others. This way we can make a difference and discover something which is potentially higher in motivation than what is happening in their enclosure which is the biggest challenge of all.

It is crucial to vary the reinforcement so much that the animal is more motivated to leave everything in their exhibit and come inside. We want them to be more curious about what is inside than what is currently in their exhibit. This is reached through being black and white in your variety. Every time we practice a recall we will make sure that the reinforcement differs in amount, kind, and location. We do this by pre planning our reinforcer.



What about hoof stock and birds? Would it work the same way?

At Kolmården Wildlife Park the emergency recall is implemented with a variety of species including hoof stock species and birds of prey. We apply the same motivation strategy but to be able to get there we have to find out first what we are able to use to motivate these challenging animals. Whenever we discover which food source they enjoy we are able to start. We also make sure that we step away from giving them their favorite food source so that way it is a surprise for the animal. The first challenge we give the various hoof stock species after the established signal is them being called away from a food source that is already available (most of the time this is hay). The goal is for it to be less motivating than the reinforcer we have. The reason is fairly simple, these animals are fed ad lib for their physiological ways that their bodies work. If they get this we start to change the situation. This is the moment the recall signal becomes stronger.

With birds of prey it works the exact same way. The difficult part for the birds of prey department at Kolmårdens Wildlife Park is the numerous distractions that can occur. We do not always have control over every situation with free ranging birds. The team decided to use the transport box as a signal for the recall. We used the same reinforcement variety with the individual bird not knowing what food item they will get when responding properly. Changing the amount, kind, and location helped us drastically in order to get the birds of prey back to their aviaries. The success of their emergency recall training was showcased during an unplanned situation. The question that keepers asked immediately was: is the emergency recall strong enough to use it for this situation? The situation that had arisen was that one of the falcons got scared and flew off to a nearby hotel. The bird didn't come back, but had a tracker for the keepers to find her. They brought a transport box which was the falcon's emergency recall signal. Even before giving the signal the falcon responded to them showing up with the transport box and was successfully contained. The animal's response was incredible and a clear signal that the box was more reinforcing than where the bird was at that moment in time.

This shows us that the strategy presented to excel in motivation works extraordinarily well, even with free flying birds. Currently the recall is one of the first behaviors conditioned to animals we think are high risk within the zoo. We use the same strategy for each species at the zoo and they all have responded well to what we see as challenging.



# Sea Lions, Tigers, and Training... Oh My! A Look Ahead to the 2023 Annual Conference.



**Shane Gorbett**  
ABMA Conference Co-Chair



**IMATA-ABMA**  
2023 CONFERENCE  
ATLANTA



The ABMA wants you to join us at the 2023 Annual Conference in Atlanta, Georgia from March 5th-10th!

After two years of virtual conferences we are so excited to see everyone back in-person in Atlanta! Not only will this be the first in-person conference in three years, this will be the first ever joint conference with IMATA, International Marine Animal Trainers' Association. There was no better way to celebrate 20 years of ABMA and 50 years of IMATA than by joining together for an unforgettable conference.

Celebrating these milestones, we are looking back to the History of Training: where we started, where we are now, and where we are going. Get ready for a week of presentations from experts and colleagues from around the world, keynote speaker presentation by world-renowned primatologist and conservationist Dr. Mireya Mayor, visits to Zoo Atlanta and Georgia Aquarium with behind the scenes experiences, and connections that will last a lifetime. The animal care field is ever-changing and the 2023 Annual Conference hopes to continue to further the fields of behavior management, research, welfare, enrichment, leadership, and so much more! Get ready to join in the discussions and as we all collaborate, explore, and share ideas about the animal care field and behavior management.

**For more information on how to register for the conference, visit the conference website:**

[https://www.imata.org/conference\\_sites/atlanta2023/index.html](https://www.imata.org/conference_sites/atlanta2023/index.html)

**Or click here to visit website**

## **Silent Auction Items Needed**

The ABMA is looking for donations for the Silent Auction at the 2023 Annual Conference! Do you have anything that you are willing to donate that you think one of your colleagues in the animal care field would love? Anything ranging from art, photographs, animal paintings, animal/zoo related merchandise and products, or experiences have been hits during our previous silent auctions. Last year during our virtual conference we were able to raise over \$4,500 through the silent auction and that was all thanks to you! The money from our silent auction goes to the Behavior Management Fund which helps to fund someone who wishes to present at the annual conference but does not have the financial ability to do so on their own. This year we will be supporting Dylan Davidoff who will be presenting "The Possibilities Are Limulus: Expanding the Knowledge of Horseshoe Crab Welfare". Even if you are unable to attend the conference, our silent auction will be online once again so that everyone everywhere can participate and enjoy!

If you have questions or would like to donate to our silent auction please email [directorshane@theabma.org](mailto:directorshane@theabma.org)





## Coming Out of Your Shell: How Training and Relationship Building Changed a Radiated Tortoise's Life

Angela Armocida, Shane Gorbett – Columbus Zoo and Aquarium

The main goal of every trainer and animal care professional is to provide the animals in our care the best life and wellbeing possible. Training and behavior management is one of the most powerful tools we can use to provide animals choice, mental stimulation, control over their care, and even enrichment opportunities. However, another important facet of an animal's wellbeing is their relationship with their trainers. Operant Conditioning with a focus on positive reinforcement training is a great way to build positive relationships with animals and can completely change an animal's life; which was the case for Rai, the radiated tortoise.

This article is a continuation of a presentation by Lauren Etzkorn of the Columbus Zoo and Aquarium which won the Behavior Management Achievement Award at the 2017 ABMA annual conference titled, "Thinking Outside the Shell for Conservation: Inspiring Zoo Guests by Training Behaviors for Public Encounters with Tortoises." This article has been included in later in this publication.

In 2015 the Animal Encounters Village at the Columbus Zoo and Aquarium received three ambassador radiated tortoises (*Astrochelys radiata*) named Rai, Dia, and Ted (get it?). During the summer of 2015, Dia was trained to walk out of the stage door of the Animal Encounters Village, walk across the upper portion of the stage, slide down a wooden ramp (as going down stairs are a challenge for tortoises), and walk across the lower portion of the stage to where guests could interact with him. Dia performed this behavior as the finale of the “Amazing Adaptations” program and during the daily “Tortoise Talk.” Over that summer, Dia helped to raise over \$4,000 dollars from guests to go towards tortoise conservation. It is still with a heavy heart that I write that Dia unexpectedly passed away in August of 2015. For the remainder of the summer we trained the largest of our radiated tortoises, Ted, to do the same stage behavior that Dia performed. Ted was able to learn the behavior, however, being a much larger tortoise, he lived up to the stereotype of a slow moving tortoise and the timing of his walk was too long to be used in formal presentations and training demonstrations.



Rai, the other radiated tortoise whose story this article will focus on, was a completely different story than his other two conspecifics. Our radiated tortoise group at the Animal Encounters Village was the true definition of training being “the study of one.” While Dia and Ted were both comfortable interacting with both trainers and zoo guests, Dia did not have the most positive



relationship with humans. While outside in his habitat space, which was shared with multiple other tortoises representing five species, Rai was active and a curious explorer. However, whenever a human would come near him, including to offer him food, he would retract himself into his shell. Throughout the day, it was feasible for trainers and guests to not interact with Rai, however, Rai lived in a greenhouse behind the scenes so he had to be carried from the greenhouse to the habitat space every morning and every evening. The transport from his overnight housing to his habitat was not a positive experience for Rai as he would be curled in his shell throughout the entire trip and remain in his shell for a while after being set down again. Trainers at the Animal Encounters Village all agreed that something needed to be changed in order to increase Rai's wellbeing and improve his life.



While the obvious answer was to condition Rai to be comfortable around people, the solution was not quite as obvious. The fall of 2015 was spent attempting to train Rai, however, little progress was made because Rai would not eat or even come out of his shell whenever a human was present. Even just holding food right in front of his face was not enticing enough for Rai to come out of his shell to eat his favorite snacks of bananas and tomatoes.

November started the "off season" for the Animal Encounters Village where the numerous onsite animal programming stopped and transitioned to outreach to local schools and nursing homes. Additionally, as temperatures dropped in Ohio, the radiated tortoises spent most of their day in their indoor habitat. During this time, the staff of the Animal Encounters Village all ate lunch at the same time in the breakroom. Shane Gorbett, one of the trainers of the Animal Encounters Village, had an idea to desensitize Rai to humans and for him to start building positive relationships with his trainers. Every lunch, Shane would bring Rai into the breakroom and sit him in the middle of the room with a pile of his favorite fruits while the staff sat and ate lunch. For the first month, nothing appeared to be changing for Rai as he remained tucked into his shell so Shane decided to change Rai's antecedents and moved him out of the break room. Rai's new lunch place was no longer in the middle of the break room, but rather just beyond the doorway in the room adjacent to the break room.

Another month passed with no progress, but, after a little over two months of daily lunches, Rai finally started to open up, literally. Instead of having his two front feet covering his face, he started



to spread his legs apart and, slowly but surely, he began to poke his head out. Another month passed and Rai finally started to eat the food that was placed in front of him! It was a major breakthrough because it was one of the first times staff had ever seen Rai eat since before, if a human was present, he was always in his shell! Every lunch from that moment on Rai would come out of his tucked position quicker and eat the food.



For the next steps, Shane started to place the food farther away from Rai so that he would have to first stretch his head farther out of his shell and then eventually Rai would have to walk a short ways to eat the food. At the beginning, Rai would walk the short distance and then sit back down to eat his food, not moving the rest of the lunch. At this point, small piles of food were placed around the room so Rai would walk around in search of the piles. After about another month, after finishing his food Rai would explore the entire inside of the building.

Now that Rai was comfortably eating and exploring the inside area the next step was to start to approximate proximity to humans. To start, Shane would sit on the floor of the room adjacent to the break room with a pile of food in front of him. Rai would come near Shane but often would partially tuck his head into his shell emitting a short hissing noise from the exhalation of air as that happened. Once Rai was more comfortable eating around Shane, he started to place individual pieces of food on the ground while Rai was in front of him to desensitize Rai to hands and arms

moving around him. The next approximation was to start moving Rai closer and closer to the center of the break room so that he would be surrounded by humans. It took Rai a couple of weeks, but he was getting more and more comfortable with humans moving their arms, walking around him, and even laughing or talking loudly.

Four months after starting the desensitization process and relationship building, Rai would eat his food in the break room and then start to walk around; exploring the entire building and inspecting trainers' shoes. Outside of his daily lunches, staff began to notice a change in Rai's behavior while in his indoor habitat in the greenhouse. Before, when a trainer was cleaning his habitat, he would sit tucked into his shell. Now, however, he would continue to explore his habitat and eat while trainers were cleaning and enriching his home. This is not to say that Rai was completely comfortable with humans at this point as he would occasionally partially tuck into his shell. However, it would only last for a second as he would then come back out and continue with what he was doing.

Now that Rai was more comfortable around humans and forming more positive relationships with his trainers, we were ready to start actively training Rai! The first step in that process was for Rai to become comfortable eating out of a trainer's hand to allow for a smooth and positive reinforcement process. We started with placing his food on the ground in front of him, letting go of the food, but also keeping the hand next to the food. That then became holding onto the food while it was still on the ground and then that transitioned to moving the food higher and higher off the ground to where we could directly feed Rai.

With Rai now positively receiving food reinforcement from his trainers' hand, it was time to continue to grow his relationship with his trainers by teaching him to target. At the Animal Encounters Village, our tortoise targets are small, brightly colored buckets and Rai's chosen target was a yellow bucket. Target training began with placing the target right in front of Rai's face so that all he had to do was slightly move his head forward and he would hit the target with his beak. One challenge that we encountered early on was the fact that removing the target in order to reinforce Rai caused him to tuck back into his shell. So we began to slowly remove the target and simultaneously reinforce Rai from the side (for quicker deliverance of the reinforcer). Quickly, Rai became more comfortable with the target being removed after he touched his beak to it.



### Radiated Tortoise Target Training

A video compilation of Rai, the radiated tortoise from the Columbus Zoo and Aquarium, learning to be comfortable around his trainers, eating from a trainer's hand, and target training.



Rai's target training progressed quickly and soon he was targeting all around his indoor habitat. At this point in time, it was spring in Ohio which meant that with the rising temperatures, Rai would be allowed to go back out to the outdoor habitat. In order to go outside, Rai would need to be carried by trainers again so helping Rai become more comfortable with being carried was a major wellbeing opportunity for improvement. One way to help Rai become more comfortable while being carried was to train him to keep his head out while being carried; turn an aversive into a behavior in which he would be reinforced.

To begin, the primary trainer would be in front of Rai while a secondary trainer, the one who would pick up Rai, walked up to Rai from the side, bent down, and then put their hands on and underneath his shell. This process took many approximations until Rai was keeping his head out while a trainer approached him. He was ready to be picked up and while doing so he was continuously reinforced for keeping his head out of his shell. However, no matter if he was being continuously reinforced at a high rate or even in the process of eating, as soon as the trainer started walking with Rai, he would always tuck his head into his shell.

After various, non successful approximation attempts it was determined that Rai needed a change in his antecedents. Instead of picking him up with his head facing outwards, Rai was trained to be picked up with his head facing towards the trainer. This change made a world of difference with Rai as there was much less external stimulus facing towards his trainer as opposed to away. To start Rai was reinforced while keeping his head out while being carried, but eventually the duration of the behavior was increased.

Five months of training and relationship building later, Rai was finally ready to start training on the Animal Encounters Village Stage. The goal was for Rai to learn the same stage behavior as Dia, the radiated tortoise who was the subject of Lauren Etzkorn's 2017 presentation (article also attached to the Winter 2023 publication of "Engage"). The final behavior was for Rai to be inside the Animal Encounters Village and upon the opening of the stage door, Rai would walk across the upper portion of the stage over to a ramp, slide down the ramp, and then walk across the lower portion of the stage to the edge so that guests could interact with him.





Just like Dia, the behavior was trained using backward chaining. First Rai was trained, using his yellow bucket target, to walk from the base of the slide to the edge of the stage. Next came the ramp! Unlike Dia, to set Rai up for the best success, we didn't start Rai at the top of the ramp but rather placed him at the very end of the ramp and then working our way up the ramp until Rai was being placed at the top and sliding all of the way down. Where Dia would slide down the ramp at record breaking speeds for a tortoise, Rai took a much more reserved approach and half slide/half walked down the ramp. Once trainers stopped placing Rai actually onto the ramp, the next challenge was for Rai to commit to sliding down the ramp which he completed with minimal hesitation.

The next part of the chain was walking from the stage door to the top of the ramp. With Dia, this was the most challenging part of the behavior because there was a wooden box on stage that blocked the view of the ramp from the door. Shane decided to train this portion differently by teaching Rai to walk straight out from the stage door and then turn towards the ramp. By not directly walking straight to the box, Rai was able to see the ramp much sooner which helped this part of the chain to break down much less frequently.



### Radiated Tortoise Stage Behavior

Stage behavior of Rai, the radiated tortoise, at the Animal Encounters Village at the Columbus Zoo and Aquarium.



Once the entire behavior was completed, Rai became the star of the Tortoise Talks and the finale of the Animal Encounters Village "Amazing Adaptations" program. Throughout the summer Rai continued to gain confidence and build relationships with not only his trainers but also with guests. By the end of the summer, all of the 25 plus staff of the Animal Encounters Village were able to be trained on carrying Rai and his stage behavior. Additionally, guests were able to interact with Rai both by touching his shell and by feeding him grapes on a stick.

Within less than a year, Rai's life completely changed and his wellbeing drastically improved! Rai's growth didn't stop there. Fast forward six years to today and Rai is still thriving and connecting with guests at the Animal Encounters Village.

Rai has since moved on from his time on stage and is now connecting with guests in a more intimate setting. He is a staple of "Jack Hanna's Animal Encounters Village Experience" which is a behind-

the-scenes experience that allows guests to connect with the zoo's animal ambassadors in a variety of ways with the end goal of helping them find their personal connection to wildlife.

During this experience, Rai walks himself into the tour space from a hallway out of view. Pushing through a burlap barrier, he rounds a corner standing tall on his legs and moving with purpose toward the row of guests in front of him. He is always greeted by gasps and looks of pure joy. Once he reaches his trainer, he gets a pile of his favorite greens, and guests can come up to touch him on his shell and take a photo.

Guests are often shocked to learn that he can feel through his shell, evidenced by the way Rai often leans into a good scratch. They are impressed by his ability to learn behaviors and moved by the plight of the radiated tortoise in Madagascar. Rai's presence in our behind-the-scenes experience allows us to touch on the conservation work that the Columbus Zoo and Aquarium does by highlighting our work with the Turtle Survival Alliance, but it is often Rai's personal story that really touches their hearts and forms that special connection.



#### Radiated Tortoise Tour Behavior

This is a video compilation of the tour behavior for Rai, the radiated tortoise at the Columbus Zoo and Aquarium. Rai is released backstage, moves through a burlap sack, and then walks over to guests sitting on a tour bench. Rai is reinforced by greens and also tactile, shell scratches.



The time and care that went into training Rai with positive reinforcement has allowed him to become a confident tortoise who rarely, if ever, hides in his shell. He is often up and moving, chasing after his caretakers shoes, and if he ever needs to be carried, his head is out and observing the world around him. Rai was able to learn his new behavior for the behind-the-scenes experience in only a couple of days due to his history of training. He is now a tortoise that is always actively looking for information and frequently engaging with his environment. It is hard to believe that he is the same tortoise that would stay hidden in his shell when he first arrived at the zoo.

Rai has become the truest ambassador for his species. By creating a personal connection with guests, he has and continues to educate about his species and, in turn, raises funds to help protect them. The story of how he overcame his own adversity parallels the fight his species is making every day in order to survive. It just goes to show that even the smallest of approximations can still make a big impact.

# Animal Behavior Conversations

## Two New Ways to Connect and Learn through the ABMA



### Animal Behavior Conversations: The Podcast of The ABMA

The ABMA is proud to present a brand new podcast debuting this February, “Animal Behavior Conversations: An ABMA Podcast”! The goal of this podcast is to implement one of the goals of the ABMA which is to continue the spread of knowledge and sharing throughout the animal care field. Each episode we will breakdown one topic that involves the science of behavior and the animal care field. We want to provide a resource for newer trainers to learn and for experienced trainers to be refreshed! The podcast’s host is Shane Gorbett and each episode he will sit down with fellow trainers and experts from across the globe to discuss all things training, behavior, enrichment, welfare, and so much more! The podcast will be available on all major platforms with new episodes weekly. If you have any questions, topics you want covered, or are interested in contributing to the podcast email [abc@theabma.org](mailto:abc@theabma.org).

#### Episode 1

**Introduction to the Podcast with, the host, Shane Gorbett, Columbus Zoo and Aquarium**

#### Episode 2

**What is the ABMA and Behavior Management with Kelly Elkins, San Diego Zoo Wildlife Alliance**

#### Episode 3

**Describe Training in One Word: Relationships with Justin Garner, Busch Gardens Tampa**

#### Episode 4

**Operant Conditioning with Steve Martin, Natural Encounters, Inc.**

#### Episode 5

**The ABCs of Behavior with Nicki Boyd, San Diego Zoo Wildlife Alliance**

#### Episode 6

**Antecedents with Chris Jenkins, Natural Encounters, Inc.**

#### Episode 7

**Consequences with Pablo Joury, Columbus Zoo and Aquarium**

#### Episode 8

**Positive Reinforcement with Andie Haugen, Cincinnati Zoo**

#### Episode 9

**Negative Reinforcement with Anaka Nazareth, National Aquarium**

#### Episode 10

**The Trainer’s Mindset with Wouter Stellaard, Behavior 360**



## About Your Host

# Shane Gorbett

Hello everyone! My name Shane Gorbett and I am really excited to host the ABMA's new podcast! A little about me: I am currently a pinniped trainer at the Columbus Zoo and Aquarium, serve on the ABMA Board of Directors, and am a major behavior nerd. I started my career in 2014 at the Columbus Zoo and Aquarium in the Animal Encounters Village caring for and training a wide range of ambassador animals and presenting educational presentations and outreaches to zoo guests and the community. It was here that I discovered my passion for training and my love for working with animals to inspire people to make changes in their daily lives to help preserve the natural world. In 2018 I joined the Cheetah Run team at Busch Gardens Tampa Bay where I was empowered to grow as both a trainer and a leader. A year later I came back home to the Columbus Zoo and Aquarium to work with pinnipeds which has been a very fun and rewarding challenge training. The creation of this podcast was spurred by the desire to be a resource for learning as we all strive to continue to provide the best possible life to the animals in our care. I am excited to share some of my training journey from radiated tortoises sliding down ramps and voluntary cheetah paintings to sea lion back x-rays and dexter cow voluntary rectal temperatures. I look forward to connecting and learning with all of you who listen and interact with the podcast as I get the privilege to discuss the science of behavior with some incredible trainers and experts in the field. Can't wait to talk some training!



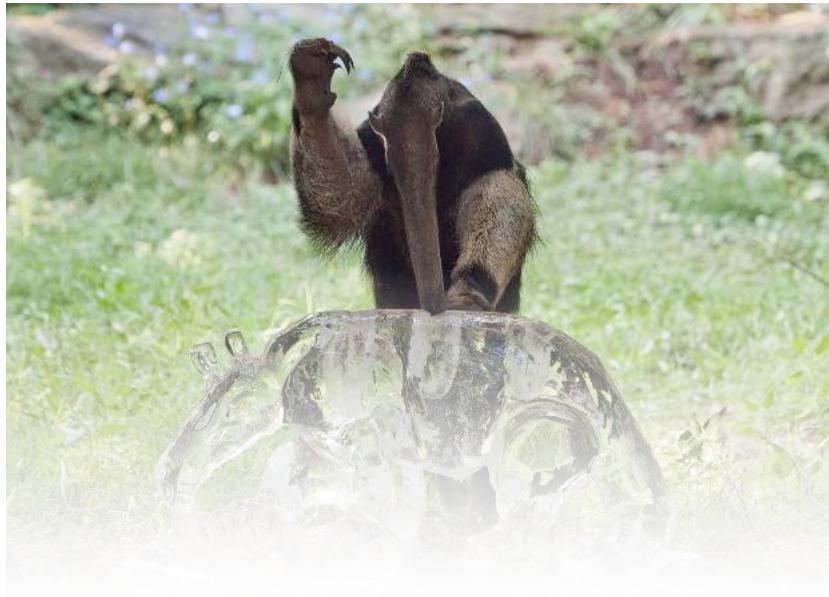
## Animal Behavior Conversations: The Zoom Series of The ABMA

### The Animal Behavior Management Alliance presents: **ABCs: Animal Behavior Conversations**

Training for Medical Procedures  
December 2022



This bimonthly zoom series will cover behavior, enrichment, husbandry, and welfare topics relevant to the the animal care field and behavior management of the animals in our care. Each "ABC" Zoom will start with a short presentation about the Zoom's topic and then convert to an open forum roundtable to colleagues to mingle, ask questions, give advice, and learn! The first Zoom in this series debuted in December and focused on training for medical behaviors. The ABMA looks forward to connecting with everyone during the next "ABC" Zoom!



## Why are Enrichment Practices in Zoos Difficult to Implement Effectively?

Dr. Eileen 'Kat' Tuite, the primary author of this peer-reviewed paper, turned to science to try and answer a question all of us in the animal care field have asked ourselves at one point: why is it so difficult to implement successful goal-based enrichment? Dr. Tuite breaks it down into five main obstacles: Let's just be cautious, purely surviving, struggle to understand the goal, can't always provide what you should, and judge the effectiveness. New perspectives and suggestions for improvement are given for each to help empower all of us to continue to grow our animals' enrichment programs. Dr. Tuite has graciously allowed the ABMA community access to her work because her ultimate goal is to help to continue to improve the lives of animals in managed care. Click the link below for the full paper!

[View Paper](#)

Or visit – <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8908830/>





**2017 ABMA Behavior Management  
Achievement Award Winner**



## Thinking Outside the Shell for Conservation: Inspiring Zoo Guests by Training Behaviors for Public Encounters in Tortoises

Lauren Etzkorn, Animal Programs Specialist – Columbus Zoo and Aquarium

Thanks to their incredible adaptations, turtles and tortoises have survived successfully for well over 200 million years. Due to human activity, however, they are now amongst the vertebrates most at risk of extinction. Despite their historic and intrinsic value they are not commonly appreciated by the public for being relatable in the same way as many of their mammalian counterparts. It can be difficult for many guests to identify with and subsequently empathize with species of the cold-blooded variety. At Columbus Zoos Animal Encounters Village, animal care staff aim to provide opportunities for the public to relate to reptiles in a way that might change their perspective.

The mission of the Columbus Zoo and Aquarium is “To lead and inspire by connecting people and wildlife.” Nowhere is that philosophy more pervasive than at the Animal Encounters Village, an interactive and dynamic attraction that combines show presentations with one-on-one guest interactions. In this space, zoo visitors become personally acquainted with a variety of species, none



more misunderstood than the numerous reptiles that inhabit the “Village,” to which it is affectionately referred. In developing our daily “Tortoise Talk,” my peers and I, faced the dilemma of engaging guests in getting to know our several tortoise species and subsequently becoming invested in their specific plight in the wild. This paper explores the Animal Encounters Village model and outlook, the process of training our endangered radiated tortoise (*Astrochelys radiata*) Dia, and how each of those components has the potential to change the minds of our zoo guests and in turn, impact species survival.

Entering the Columbus Zoo, zoo guests would find the Animal Encounters Village located to the left in Jungle Jack’s Landing, flanked by rides and “Stingray Bay”, a stingray touch pool experience. The colorful village façade hides enclosures for the majority of our seventy species. Congruent with the zoo’s larger mission is the Village’s private motto: “touch the heart to teach the mind,” a slogan coined by previous Zoo Director, Jeff Swanagan, and reiterated amongst staff. That motto has become a part of the culture at the Animal Encounters Village where not only permanent but also seasonal staff are encouraged to be creative in the development of new opportunities for engaging guests with our animals.

At any given time, a guest could meet one of our staff, internally dubbed “villagers,” in front of the village or on the path leading to it, with an animal in tow. Opossums, ferrets, rabbits, flamingos, and sugar gliders are some of the most well-loved village inhabitants and among the species that guests have the opportunity to touch. In that grouping are the often misunderstood reptiles. A variety of lizards, snakes, turtles, and tortoises are species commonly seen at the Animal Encounters Village. The village has several exhibit spaces including a rotating mix-species yard, a flamingo yard, and a tortoise yard. In these spaces, staff serve as interpreters to the public and work hard to create unique experiences for each passing guest. At pre-designated times of day, zoo visitors have the opportunity to catch several microphoned encounters: one of our four behavior-packed shows (featuring kinkajous, macaws, cheetahs, hawks, porcupines, skunks, coatis, and many others); penguin swims; sloth encounters; and the Tortoise Talk.

Before the development of the Tortoise Talk, the Village boasted a diverse tortoise yard with six species roaming about at any given time as well as “Grouchy’s Walk.” As a solution to a logistical challenge, villagers had trained ‘Grouchy’, a large sulcata tortoise (*Centrochelys sulcata*) to target with a red bucket to walk from his off-view housing across the Zoo’s entry plaza ending in the Village’s tortoise yard where he spent summer days trucking along, knocking other tortoises out of his path. On his own, Grouchy was quite the draw. As a former pet, he was responsible for busting many myths and misconceptions regarding speed, strength, and most interestingly intelligence. As a seasonal at the time, I was given the privilege of participating in Grouchy Walks—though in the

ninety-degree heat of August, those sometimes forty-five-minute treks did not always feel like a privilege. In that role, however, I had many encounters with guests revealing to me their astonishment at Grouchy's intelligence as it was demonstrated by his ability to target his beak to a red bucket. Those interactions offered numerous opportunities to explain the effectiveness and importance of positive reinforcement as a training method but also served to plant the seed in the minds of myself and the other Village staff that training even simple behaviors, like targeting, in species that guests perceived as unintelligent could have a powerful effect.



As part of an annual goal, I was given the task of evolving our tortoise experience by my manager, an individual particularly passionate about tortoises. We knew we wanted to incorporate the Grouchy walk when we could but we also needed to find a way to capitalize on the excitement of discovery that guests experienced when watching Grouchy perform his behavior in a way that would allow us to highlight some of the more endangered species in our tortoise yard, and to potentially even raise funds for them. The dialogue of the talk initially stressed some of the common threats to endangered tortoises. As we implemented the talks, I realized that the staff was having trouble making the connection for guests between Grouchy, a species not at all threatened in the wild, and the more vulnerable radiated tortoises (*A. radiata*) for whom we had tried to raise funds to that point, unsuccessfully. It wasn't until a staff member, Shane Gorbett, began to train Dia, one of our newer radiated tortoises to do Grouchy's same targeting behavior, that we began to gain traction on the fundraising front.

Shane, at the time a one-year veteran of the Animal Encounters Village, began his first project as a primary trainer in the early summer of 2015 along with the help of myself and several others. We planned to get Dia, the smallest but most confident of the three new radiated tortoises, to go on a target-trained walk as an alternative to Grouchy. However, it was a matter of just a week or two before we realized that this particular tomato-obsessed tortoise, was the most perfect tool for the job of connecting people to his species. The tortoise talks turned temporarily into microphoned training encounters while guests watched Dia, at a speed and with a motivation that surprised even us villagers, plow after his target around the village.

Shane trained Dia in two weeks to target at a bucket and at that point, both of them needed a new challenge. We developed a plan which involved Dia making his entrance on stage to end one of our four daily themed shows. The original goal was to have Dia enter the stage through a human door, walk to the stage edge, and be carried by one of the hosts. We did not believe he would be able to navigate the stairs built into our stage to get close enough for guests to see him. Using the target initially and working in small approximations, we back-chained the behavior, beginning at the edge of the upper part of our stage and working back to Dia's entrance from the stage door. The target was an instrumental prompt in getting Dia to make his way from the dark interior of the building to the bright outdoors and particularly in navigating over a metal lip at the base of the doorway.



After ten to fifteen reps of entering through the door and making his way to the corner of the stage, we were able to fade the target. At that time, it was a point of discussion amongst staff as to whether the trainers had become a target themselves or whether our presence was more of a prompt.

Because the process was quick, we came up with a way that Dia could potentially commute from the top of the stage, down the stairs, and along to the front of the stage to be within clear view of the public. A short wooden ramp, approximately two feet long and a foot-and-a-half tall at the highest end, used for our black-footed penguins (*Spheniscus demersus*) to slide onto the lower stage, became the perfect hardware for Dia! As an experiment, but anticipating that it would need smaller approximations, we set the ramp up and positioned the target bucket at the bottom of the ramp. Without hesitation, Dia plummeted forward from the top of the ramp, sliding swiftly down and touching his beak to the bucket. After the first repetition, we were concerned that Dia would demonstrate hesitation as he had slid down the ramp fast, even to those of us watching. Yet once he was reset right at the top of the ramp, he immediately came sailing down a second time.

The highlight (and thrill) for the audience became the portion of the behavior which involved Dia turning a slight corner along a long box used as a stage prop, with his trainer out of view, and subsequently sliding down the long ramp. The corner of the box proved to be the most challenging part of the stage behavior, particularly when another staff was present within Dia's view. If a staff



person stood too near the stage within his line of sight, Dia would sometimes change direction in pursuit of them. Several sessions became dedicated to Dia being reset at the box and simply walking along the long box and turning the slight corner to find his target and get reinforced. At that time, we worked in small approximations on fading first the red bucket and then the prompt of the trainer's body out of view with the most immediate step-back being the trainer popping back into Dia's line of sight. After Dia had become solid at rounding the corner and sliding down to his target, it was quickly faded out. Soon, the behavior was fully trained and passed off to several others. We added dialogue about the species' heartiness and ability to overcome both direct obstacles in the rough terrain of their spiny forest habitat and indirect obstacles such as habitat loss and illegal trafficking to tie in the ramp sliding and stage navigating behavior. With that, Dia had become a regular finale to our eleven o'clock show as well as the star of our Tortoise Talk.

With Dia's regular performance in our shows and tortoise talks we began to get feedback from the guests— amplified echoes of things we had heard in the process of walking Grouchy years prior. People were amazed and constantly made connections between the species' intelligence and their ability to learn what to guests appeared to be a challenging behavior. Though more quantitative research would need to be conducted to prove this definitively, it seemed to us that the perception of the tortoise as "intelligent" was correlative to the guests' affection for them as a species.

We used what seemed to be a newfound excitement for the tortoises as an opportunity as educators to go more in-depth into the details of the radiated tortoises' specific plight and to develop our conservation messaging. During Dia's multiple behavior demonstrations each day, the staff began to outline the threats to the species and the things that the Columbus Zoo was doing to combat them, like supporting the Turtle Survival Alliance (TSA), an organization with a multi-thronged approach to beating the extinction of dozens of turtle and tortoise species. TSA is one of few organizations working on the ground in Madagascar on radiated tortoise conservation. Specifically, they are focused on the rescue and rehabilitation of tortoises as well as numerous educational outreach programs. Speaking to the public about the strong partnership between our organization and TSA had the wonderful effect of increased participation from the guests in our fundraising efforts.

With Dia as the star, and with the help of a red-fronted macaw (*Ara rubrogenys*) named Nico (who collected donations from guests in exchange for tortoise conservation pins) the funds we were able to raise to support TSA grew exponentially. Before Dia participated in our Tortoise Talk and eleven o'clock show, we raised an average of two to six dollars per day in support of tortoise conservation. But once he was up and "sliding," we were collecting at least thirty dollars a day, occasionally upward of seventy. Most of the donations came in the form of just two dollars, handed over to our

bird friend, Nico. Between May and October of 2015, in the Animal Encounters Village, we raised \$4,330.00 of which one-hundred percent of the proceeds went to support TSA. Last year, in the same amount of time, we raised \$5,462.00.

In just two summers Dia helped us to raise nearly ten thousand dollars, of which almost every donation was made of two dollars. That meant that as many as five thousand zoo guests, in two years, chose to contribute to tortoise conservation while visiting the Animal Encounters Village. We could not have accomplished those fundraising achievements without the training and demonstration of Dia's quick learning as an individual and amazing adaptation as a species. The effect that this process had on our ability to raise funds to support tortoise conservation was indisputable but it may also have made an important impact on the way that our staff understood the training. Grouchy and Dia were among the first reptiles that we had trained and with such great success (after years of working with dozens of mammals and birds) and will most certainly not be the last.

I am sad to include in this paper that its incredible subject, Dia, passed away after the first summer of changing hearts and minds. He was an amazing ambassador for his species and taught us a lot about his species and about the true impact of positive reinforcement training in its ability to influence public perception and ultimately motivate change. In the year and a half since his passing, our staff has begun working with both of his radiated tortoise counterparts, Ted and Ray, on similar behaviors. This process has truly demonstrated to us the truth behind "the study of one", no two individuals of the same species are the same. Not all of them are the right tool for the same job. Ted, for example, has successfully learned the stage and ramp behavior but is much larger and incidentally much slower. Due to that reality, he is not well suited to the fast pace of our eleven o'clock show but remains an effective representative of his species for our Tortoise Talk.

This year, we will train Ray to do the stage behavior with a twist at the end. When he reaches the edge of the stage we plan to offer reinforcers, in the form of his favorite food—grapes, to be delivered to him at the end of a long stick by audience participants. This modification of Dia's original behavior came as a way to overcome the challenge of reinforcing Ray, who was inclined to tuck his head swiftly into his shell when the human hand came forward bearing treats, no matter how slowly. Hopefully, the antecedent arrangement of the reinforcer will not only resolve that issue but will serve as another opportunity to break down barriers between our human guests and the incredible reptiles they meet in Animal Encounters Village. Capitalizing on the model of Dia, who was able to surprise and astound zoo visitors, we continue to work on training projects with our animals, especially those creatures more commonly unappreciated by the public to not only excite our zoo guests but ultimately to inspire them as well!



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